DIW Berlin

German Institute
for Economic Research

Discussion Papers

518

Ulrich Thießen

Fiscal Federalism: Normative Criteria for Evaluations, Developments in Selected OECD Countries, and Empirical Evidence for Russia

Berlin, October 2005

IMPRESSUM

DIW Berlin
Deutsches Institut für Wirtschaftsforschung
Königin-Luise-Str. 5
14195 Berlin
Tel. +49 (30) 897 89-0
Fax +49 (30) 897 89-200
www.diw.de

ISSN print edition 1433-0210
ISSN electronic edition 1619-4535

.

DIW Berlin

Discussion Papers 518

Ulrich Thießen*

Fiscal Federalism:

Normative Criteria for Evaluations, Developments in Selected OECD Countries, and Empirical Evidence for Russia

JEL classification: H77, P21, R10
Keywords: Fiscal Federalism, Fiscal Equalization, Transition

Berlin, October 2005

* German Institute of Economic Research, Department of International Economics, uthiessen@diw.de

List of contents

List of tables

Appendix

List of figures

Fiscal federalism: Normative criteria for evaluations, developments in selected OECD countries, and empirical evidence for Russia

Abstract[1]

Criteria for evaluation of systems of fiscal federalism are derived from the current state of the theory of fiscal federalism. In a second step we provide an overview of developments of fiscal federalism systems in OECD countries highlighting some existing trends. Third, an overview of Russia's regional economic characteristics underlines several reasons that call for a redistribution of income among regions. Fourth, we apply the defined evaluation criteria to Russia's system of fiscal federalism. We find that there has been effective equalization of income to regions with relatively low per capita income but it was mainly the medium income group of regions that carried the burden for this redistribution. Several relatively very wealthy regions were –according to our data- persistently subsidized through the system. Fiscal equalization may have caused significant disincentive effects for subnational governments because efforts to improve their tax base and raise tax revenues tended to result in a higher net share of tax revenues to be transferred to the central government. The transfer system had major weaknesses, especially that of promoting bargaining between regions and the center, which may not have been solved through recent reforms of the system. Also a very important element of fiscal federalism is almost absent, namely revenue discretion on the part of subnational governments. Hence, the paper makes reform proposals.

JEL classification: H77, P21, R10

Keywords: Fiscal Federalism, Fiscal Equalization, Transition.

[1] The analysis was prepared for the Russian European Center for Economic Policy (RECEP) in Moscow. The author gratefully acknowledges the support provided by the members of RECEP, especially Jean-Paul Blandinieres, Vitaly Tambovtsev, Alexander Andryakov, Lilia Valitova, and by Patricia Alvarez-Plata at DIW. All data used in the empirical part of the paper were generously provided by Alexander Andryakov and Lilia Valitova who also helped in their interpretation. Any errors are the sole responsibility of the author.

1 Introduction

Russia's system of fiscal federalism during transition has been analyzed in many contributions (e.g. Treisman, 1996, Zhuravskaya, 2000, Martinez-Vazquez, 2001, Alexeev and Kurlyandskaya, 2003, Desai et al., 2003). Above all they found that the system was relatively unstable and provided adverse incentives mainly due to the high influence of political factors. From the perspective of economic theory the transfer system, the distribution of expenditure responsibilities, and the revenue assignments, all had major weaknesses. The reforms of fiscal federalism proposed in 2003 by the "Federal commission on the division of competences between levels of power in the Russian Federation," (in short the 'Kozak Commission') aimed at a comprehensive reform of all elements of the fiscal federalism system (e.g. Martinez-Vazquez and Timofeev, 2003, Kurlyandskaya, 2004a).

These proposals were largely consistent with economic theory and they resulted in ongoing comprehensive revisions of more than hundred laws (above all the tax code, the budgetary code, and the law on general principles of local self government), in the cancellation of laws incompatible with the new system and in the introduction of new laws, such as the law on monetization of social benefits.

However, in the beginning of 2005 the reforms were seriously interrupted by an initial infeasibility of regions to implement the 'law on monetization of social benefits'. This law called for a necessary and very reasonable substitution of cash payments for in-kind social benefits to eligible housholds. But the resulting social benefit expenditures were much higher than estimated and much higher than the costs of previously granted in-kind benefits.[2] This resulted not only in some social unrest and in a cancellation of the efforts to implement this replacement in many regions but in a halt of the reforms or even chaos, where the issues of federalization and redistributing government powers have been left open once again (Kurlandskaya, 2005a).

This difficult current situation could thus be seen as an important chance for improving serious weaknesses of the reforms. To show this is the aim of this paper. As one cornerstone we present a descriptive analysis of results of the transfer system in the past (1996-2003). It

[2] A main reason for this difference is, among others, that in-kind benefits could be granted to households only at those localities, where there was a supply of such goods and services (heating, public water, telephone service, public transport etc.). By contrast, cash benefits can be granted at any locality.

demonstrates anomalities, which have not been shown in this form before and are surprising, despite several important analyses of the transfer system that also found serious weaknesses (e.g. Zhuravskaya, 2000, Alexeev and Kurlyandskaya, 2003, Desai et al., 2003). Policymakers should be aware of them in order to ensure that these anomalities do not persist. And this would require additional amendments to the new reforms recently implemented, because the new system of transfers has still considerable weaknesses. In addition, although the recent reforms brought considerable improvements to the expenditure assignments and proper financing for functions delegated to subnational governments, they have weaknesses concerning insufficient own-source revenues of local governments and insufficient abilities of subnational governments to adjust their revenues at the margin.

The remainder of the paper is structured in the following way: Section 2 presents on the basis of the current state of theoretical reasoning those principles for a system of fiscal federalism, on which there appears to be general agreement in the literature. Section 3 summarizes experiences and new developments in OECD countries concerning reforms of fiscal federalism. Section 4 presents our evaluation of Russia's system on the basis of the criteria presented in section 2. We start with the descriptive empirical analysis of the transfer system during 1996-1999 showing anomalities. Then it is argued why the recent reforms may not achieve a break with this past. Then we evaluate the new distribution of expenditures and the revenue assignments. Section 5 concludes.

2 Evaluation criteria for a fiscal federalism system derived from the current state of the theory of fiscal federalism.

The theory and models of fiscal federalism are concerned, above all, with three broad areas of research:

- Equalization of income disparities between the regions.
- The distribution of government responsibilities (functions) and thus expenditures among the different levels of government.
- Assignment of revenue sources to the budgets of the different government levels and establishment of some taxation autonomy for local governments so as to provide them with a certain degree of self-financing and thus self-reliance.

An additional important aspect, which has to be considered in each of these research areas, is whether the system of fiscal federalism provides incentives for regional and local governments to promote within their possibilities sustainable economic growth, to raise revenues and minimize costs of service delivery and administration.

For these areas we explicitly derive criteria from the theoretical literature, which could be reasonable minimum standards, or norms, that should be fulfilled by any system of fiscal federalism.

2.1 Equalization of income disparities among regions

The arguments for vertical and horizontal fiscal equalization are manifold.[3] Most well known is the argument for redistribution of income between wealthier and poorer regions. Redistribution serves to maintain a certain level of public goods provision and thus certain minimum social standards throughout the country. Additional arguments include the establishment of an efficient nationwide net of physical infrastructure, insurance for public budgets against sudden revenue shocks, and the internalization of vertical and horizontal spillover effects of budget decisions taken by the central or a subnational government. Hence, fiscal equalization may create important potential beneficial effects expected to raise the long run growth potential of the entire country. However, redistribution is likely to have adverse incentive effects on the behavior of the regions and their magnitude may rise with the degree of equalization, i.e. the chosen equalization coefficient. Although the research concerning such adverse effects is only evolving and very limited, the available evidence suggests that they need to be taken seriously (see the examples for disincentives shown for Canada in Smart and Bird, 1997, and Smart, 1998, and for Germany in Baretti, Fenge et al., 2000, and Baretti, Huber et al., 2000). Assuming that a rising degree of equalization produces both benefits and disincentives, there is thus an optimal level for it, where the marginal benefits and marginal costs of equalization are equal.

There is agreement in the literature about essential characteristics of a well-designed system of vertical and horizontal transfers (e.g. Bird and Wallich, 1993, Ladd, 1994): It should be transparent in the sense that rules or formulas determine the transfers rather than discretion and political bargaining. Transfers should be based on the potential revenue-raising capacity

[3] See the discussion, for instance, in Boadway and Hobson (1993).

and not on actual revenues so as to avoid disincentives to fiscal effort. Transfers should in principle be of an unconditional nature and not interfere with the expenditure priorities of local governments with two important exceptions: The first one concerns transfers to finance social protection.[4] The second exception concerns the financing of expenditures with "spillovers", i.e. sizable benefits for outsiders (non-residents of the respective jurisdiction), such as education, interstate infrastructure, and arguably also health care. These transfers may take on a conditional nature to protect the interests of outsiders. Such conditional transfers are often matching (conditional) grants, where the central government pays a part of the cost of certain expenditures carried out by local governments.[5]

Considering these arguments, a pragmatic approach is adopted and two very flexible norms are defined:

- *There should be a positive effective degree of equalization without causing significant adverse incentive effects for regional governments to promote regional economic growth, provide for efficient administration and raise revenues.* To empirically assess the fulfillment of this norm thus requires measurement of both the effective degree of equalization and of potential disincentive effects.
- The transfer system should be based on rules, be transparent, and it should consider the potential revenue-raising capacity. Only those transfers that are intended to cover expenditure programs with sizable spillovers (e.g. education, health, interregional infrastructure) and transfers that finance social protection should be of a conditional nature.

[4] The central government should guarantee a minimum level of social support for families and individuals irrespective of the fiscal situation of the respective local or regional government. At the same time, the competence of local authorities especially concerning the prevention of misuse of social support should be utilized and administrative costs minimized so that local authorities should deliver these services and possibly determine some details of the provision. Conditional transfers may accomplish these goals better than either forcing subnational governments to finance all social support or to burden the central government not only with the financing task but also with the task of efficient provision of social support.

[5] Although there are no guidelines as to the precise matching rate appropriate for particular expenditure programs, the rate could be viewed as having three components (Bird and Wallich (1993)): There is a basic matching rate, which reflects the degree of interest on the part of the central government in the provision of the service, motivated by spillovers or other considerations. The second component is a uniformly determined measure of fiscal capacity. The third element is the degree of local demand elasticity (local enthusiasm). Thus, the matching rate faced by a given local government would be higher, the larger the central interest and the lower both the local fiscal capacity and demand elasticity are.

2.2 Distribution of expenditure responsibilities among the different levels of government

The view of Musgrave (1959) is still widely shared, that of the three main functions of a government (i.e. allocation, redistribution and stabilization) only the allocation function may be shared by the different government levels. Redistribution activities should be exclusively performed by the central government, because otherwise competition of regional governments, enforced by mobility and migration of private households, may lead to an erosion of the social support system.[6] The important point is that these policies should be formulated on the national level and financed in whole or to a large extent by central transfers so that local competition in social policies is largely prevented. The same is analogously true with regard to macroeconomic stabilization. This function cannot be effectively performed by regional and local governments, because neither do they have particular incentives to implement coordinated counter-cyclical measures such as tax reductions and spending increases during a recession (or the opposite during a boom), nor are they responsible for monetary policy, which is also an important instrument for stabilization. But regional and local levels are, of course, asked to support central government stabilization efforts and not to undermine them, which would call for the establishment of a formal “stability pact” that regulates the responsibilities in the area of stabilization.

Overall then the distribution of government responsibilities among the different government levels concerns primarily the allocation function. This function refers to the provision of public goods and services including the correction of inefficiencies of private markets. However, among these tasks are also many important ones where it is not controversial that they should be the responsibility of the central government and not of lower levels of government, either because the central government can implement them at lower administrative costs or because competition of regional governments may lead to inefficiencies such as an undersupply of public services. Following Bird and Wallich (1993) it may be argued that the allocation function of the State includes three types of services, whose provision in the sense of defining supply levels and securing adequate financing should be the

[6] This does, however, not mean that local governments should not be involved in formulating social support policies and deliver social services on the local level. Their expertise is very much needed in defining these policies and in making the provision of social services efficient, which includes minimization of local administrative costs in providing the services and of misuse and also permanent monitoring of their effectiveness.

responsibility of the central government or in some instances, that of regional governments, but not the responsibility of local ones:

First, those services for which there are, or are for political reasons presumed to be, no significant differences in demands in different jurisdictions (e.g. defense, national security, education, public health). Second, services which exhibit sizable beneficial “spillovers” between jurisdictions (e.g. education, public health, environmental protection, interstate transport). Third, services for which the additional costs of local administration are sufficiently high to outweigh advantages for them to be administered by local governments (e.g. administration of income taxes).[7]

Despite the central government´s overall responsibility for the provision of services that satisfy these criteria, the actual delivery of many of them may well be delegated to local governments in order to adhere to the subsidiarity principle and realize efficiency gains. Transfers and a control system concerning the execution could guarantee that minimum provisioning standards are fulfilled nationwide.

Considering all these arguments, our evaluative norm becomes: *Local governments should have the expenditure responsibility for all those public goods and services in the allocation branch, which may be assumed to have significant differences in demand in different localities and are not associated with considerable spillovers. In addition, they may become the executor of expenditure programs defined by the central government and financed via transfers concerning public goods and services that are characterized by significant spillovers.* Thus, subnational governments may receive expenditure assignments for a large array of goods and services, examples of which are presented in table 1.[8]

---

[7] The tasks of education and health care show that the Bird and Wallich (1993) criteria are not mutually exclusive. Further examples for tasks of the central government within its allocation function that also satisfy several of these criteria are competition policies and other regulatory policies to prevent market failures (supervision of financial and energy markets, of telecommunication, railways etc.).

[8] The categorization shown in table 1 is subjective and indicative only because arguments can be made that most expenditure functions are shared between levels of government. The goal here is to provide nevertheless an orientation for the expenditure distribution between the different government levels.

Table 2-1
Indicative expenditure assignments for subnational governments in the "allocation branch" of the functions of government

	Responsibilities for local governments		**Responsibilities for regional governments shared with the central government**
Theoretical distinction of services	Services that are assumed to exhibit significant differences in local demands and which may not cause substantial spillovers between juris-dictions	Services that are assumed to exhibit differences in local demands and which may cause significant spillovers, that could, however, be handled by transfers or contracting	Services for which there are, or are for political reasons presumed to be, no significant differences in local demands. Services which have significant spillovers that cannot be satisfactorily handled by transfers or contracting. Servcies for which the additional costs of local administration are sufficiently higher to outweigh the advantages of being administered by local governments.
Concrete examples of servcies	Local public transportation Fire protection Local Roads Libraries Local police services Sanitation Sewage Public utilities Housing Culture and parks Sports facilities Community centers	Basic education (including child care) Basic health services	Interlocal transportation Secondary and higher education Secondary and tertiary hospitals Special service hospitals Interstate roads Local museums

2.3 Assignment of revenue sources to the budgets of the different government levels and establishment of some taxation autonomy for local governments

There appears to be general agreement in the literature about key principles concerning the assignment of taxes to the different government levels:

- Taxes on relatively mobile factors of production (e.g. taxes on labor and profits, capital gains tax), taxes that are usually progressive for the purpose of income redistribution (e.g. personal income tax, inheritance tax), and taxes whose base can be verified better by the national government than by local governments (e.g. income taxes) should be primarily determined by the central government.[9] Otherwise the following main problems may arise: First, tax competition among the lower levels of government may lead to undertaxation of relatively mobile factors of production (e.g. Zodrow and Mieszkowski, 1986, Edwards and

[9] However, there is also broad agreement in the literature that local governments could and should be allowed to levy surcharges -within certain limits- on those of these taxes, which are borne by local residents, such as the personal income tax and the inheritance tax.

Keen, 1996, Sinn, 1998, Hines, 1999). Second, redistribution tasks are unlikely to be satisfactorily fulfilled (Wildasin, 1991), Feldstein and Vaillant, 1994). Third, tax evasion may be promoted, if local governments are less able than the central government to verify the tax bases. In addition, natural resources, although immobile, should be taxed by the central government because they are usually regionally concentrated thus contributing to uneven regional development if regional governments keep the revenues.

- Regional and local governments should have significant own revenue sources determined within limits by themselves. Only then can there be some beneficial tax competition between jurisdictions, can their autonomy and accountability be enhanced, and thus an improved allocation of resources be expected. The taxes they are entitled to levy should concern relatively immobile factors (e.g. land, fixed property) and they could be surcharges on income and property taxes borne by local residents. The taxes and fees levied by them should to the extent possible be benefit related in order not to repel mobile factors, i.e. "…neutralize the impact of fiscal operations on location choice" (Musgrave and Musgrave, 1984, p. 517).
- Given that the own revenues of lower levels of government, including subnational surcharges, will usually cover only a fraction of the expenditure responsibilities, the remainder must be financed via tax sharing, revenue sharing, and transfers.

Of these, from an economic point of view, tax sharing is the least preferred financing method. Tax sharing means that the central government determines the base and the rates of the tax, and shares revenues with the subnational jurisdictions where revenues originate. Hence, there is no tax competition, and fiscal autonomy and accountability exist only in spending (Mc Lure, 1995).

Revenue sharing provides financing to subnational governments on the basis of factors such as population, average income, incidence of poverty, tax capacity and fiscal effort. It too provides little subnational fiscal autonomy but it is considered to be an effective means of fiscal equalization (Mc Lure, 1995).

Considering all these arguments, our norm regarding the assignment of revenue sources and taxes has the following four main elements:

- *Lower levels of government should have significant own revenues determined within limits by themselves.*

- *Taxes levied by them should not concern the relatively mobile factors of production with one exception, namely surcharges on the central government personal income tax and inheritance tax, which they should be allowed to levy within limits.*
- *The revenue sources granted to subnational governments should, of course, be sufficient to cover their expenditure responsibilities and, if these responsibilities have a tendency to rise,[10] the revenue sources should increase accordingly and without a significant time lag.*
- *The revenue sources for subnational governments should be relatively stable and predictable.*

Table 2–2 summarizes our evaluative framework.

Table 2-2
Summary of framework for evaluating intergovernmental fiscal relations

Equalization of income disparities among regions	**Distribution of expenditure responsibilities**	**Assignment of revenue sources**
- There should be a positive effective degree of equalization of income between regions. - Equalization should not cause significant adverse incentive effects for subnational governments, for instance with regard to improving their own tax base, the efficiency of their tax and other government administration, and the efficiency of their expenditure decisions. - The transfer system should be based on transparent rules, which consider the potential rather than the actual revenue-raising capacity. Only those transfers that are intended to cover expenditure programs with sizable spillovers should be of a conditional nature (e.g. education, health, interregional infrastructure).	- The assignment of expenditure responsibilities should be clearcut and follow the subsidiarity principle. - Thus, local governments should have the expenditure responsibility for all those public goods and services in the allocation branch, which may be assumed to have significant differences in demand in different localities and which are not associated with considerable spillovers, unless these spillovers are considered in the (well designed) transfer system. Hence, subnational governments may receive expenditure assignments for a large array of goods and services, examples of which are suggested in table 1. - The efficiency of the fulfillment of responsibilities should be regularly and automatically assessed, based, for instance, on national and international comparisons.	- Lower levels of government should have significant own revenues determined within limits by themselves so as to provide them the opportunity to adjust their revenues at the margin. - Taxes levied by them should not concern the relatively mobile factors of production with one exception, namely surcharges on the personal income tax, which they should be allowed to levy within limits. - Natural resources (although immobile) should be taxed by the central government. - The revenue sources granted to subnational governments should be sufficient to cover their expenditure responsibilities. - The revenue sources should increase together with the responsibilities without a significant time lag. - The revenue sources should be relatively stable and predictable.

[10] There is considerable empirical evidence that supports “Wagner´s law” according to which the scale of total government activity tends to expand relative to the national economy, especially in developing countries, e.g. Beck (1979).

3 Experiences and new developments in selected OECD countries

In many OECD countries fiscal relations between the central and lower levels of government have come under increasing scrutiny in an attempt to improve public sector efficiency and thus to promote economic growth. In several European countries an additional reason for the increased discussion of fiscal federalism was fiscal consolidation required in response to both unfavorable demographic trends and the formal limiting of public sector deficits and public debt growth prior to the European Monetary Union. This indirectly forced countries to consider and possibly to regulate the split of public debt growth among the different levels of government. The effects of "globalization" may also have contributed to this increased thinking about reforms of fiscal federalism in many countries. But although serious discussions in many countries are taking place, they have not yet been followed by actual comprehensive reforms of fiscal federalism systems. Rather many countries with formerly relatively low degrees of decentralization (measured, for instance, by the share of expenditures of sub-national governments in total public expenditures) increased this degree successively and devolved somewhat the provision of public goods in steps (e.g. Argentina, France to a minor extent, Italy, Korea, Netherlands, Portugal, Spain), whereas several countries with formerly relatively high degrees of decentralization lowered this degree somewhat (e.g. Canada, Denmark, Finland, Germany, Norway, Sweden, Switzerland). Thus, at least with regard to high-income OECD countries there appears to be a trend of convergence towards a medium degree of fiscal decentralization (e.g. Thießen 2003).

But devolution of expenditure functions has not proceeded evenly and a generally accepted new "model" of how to organize fiscal relations between different levels of government, which could be presented here, has not yet developed. Owing to the institutional differences of countries, a universal model may also be difficult to develop. But there appears to be widespread agreement on the general "norms" outlined in the previous section and thus on setting the proper incentive structure.

3.1 Transfer and equalization schemes

The experiences in several OECD countries concerning transfer and equalization schemes show that disincentive effects for both recipient and donor regions were increasingly recognized. Consequently there have been reforms of these systems simply by freezing or reducing the equalization component of transfers and grants (e.g. Italy and Spain), or by using partial equalization (e.g. Nordic countries). Thus, deliberate compromises concerning equity objectives were made (Joumard and Konigsgrud, 2003). Incentive problems were also identified owing to a widespread problem of poor cost-effectiveness in service delivery. To counteract these problems many OECD countries refined their transfer systems through replacing earmarked grants by general-purpose grants, introducing performance criteria, and with regard to matching grants matching rates were reduced.

3.2 Distribution of responsibilities among the different levels of government

Expenditures on education, health care, and social security account for the largest share of sub-national spending in most countries, especially with regard to the regional level of government in federal countries (Joumard and Konigsrud 2003, OECD 2003). In the mentioned countries whose degree of fiscal decentralization tended to rise, a common reason was a reassignment of certain functions to sub-national governments. In particular, this refers to health care and education in Italy, Mexico, Spain, and regarding welfare programs in Korea. In several central European countries there has also been a recent devolution of expenditure assignments, for instance, in the Czech Republic hospital ownership was shifted to regional governments, in Poland responsibilities regarding education, roads, and health care were shifted to subnational governments, and in Hungary regarding education. In Canada, responsibilties for some labor maket policies were shifted to subnational governments. Friedrich et al. (2003) studied the case of four European countries (Germany, Poland, Switzerland, and United Kingdom) and argued that for these countries local expenditures for social tasks increased, central government interventions with fiscal consequences for sub-national governments have intensified, and municipalities experienced a reduction in revenue autonomy.

An increase of responsibilities and/or autonomy on the part of lower levels of government in the provision of public goods and services such as education, health care, social benefits, and labor market policies may result in deteriorating sub-national government fiscal balances or in the underprovision of these important goods and services due to too little consideration being given to their very important positive externalities and to economies of scale. As a way to alleviate this problem, a trend is observable in many countries, and also in Russia, that smaller jurisdictions were amalgamated. But it is clear that political boundaries are not necessarily economically efficient and that this method has only limited power as a remedy: If sub-national governments are responsible for the provision of a growing array of public goods and services, full utilization of positive externalitites requires well-designed revenue sources for their financing including a transfer system that provides sufficient resources but no disincentive effects for developing the local tax base etc. Experiences, however, have been, that this task has not yet been satisfactorily solved. The discussions on revenues for subnational governments intensified.

3.3 Assignment of revenue sources

Given the apparent convergence of the degree of fiscal decentralization towards a medium degree, which is observable at least among the group of high-income OECD countries, there is no unique pattern of the development across countries of the sub-national share of general government revenues excluding inter-governmental transfers (Joumard and Konigsrud 2003, OECD 2003). But in those countries that experienced an increase in fiscal decentralization, the subnational revenue share tended to increase, in some cases markedly (e.g. Italy and Spain), and in those countries that lowered their formerly relatively high decentralization degree, this trend was generally falling somewhat (e.g. Scandinavian countries), reflecting endeavors to adjust revenue assignments to expenditure responsibilites.

However, the issue of own-revenue sources and of revenue autonomy of sub-national governments, especially of local governments, has been widely acknowledged to be a crucial question that needs attention. It is one of the most difficult issues of fiscal federalism, because there are only very few taxes and fees, which fulfill the theoretical demands summarized in the previous section to be good revenue sources for local governments (i.e. immobile tax bases, evenly geographically distributed, and generating stable revenues over the business cycle).

A general characteristic of this discussion in many countries is that there is increasing agreement to give sub-national governments more power to determine their tax revenues and fees. The use of "piggybacking" on taxes levied by the central government, i.e. allowing sub-national governments to impose a surcharge on federal taxes, such as the personal income tax and enterprise profit tax, is often used and generally considered to be a feasible method. But owing to long run experiences with this method, it is acknowledged that there should be lower und upper limits for such surcharges.[11] Due to manifold experiences, there appears also to be agreement to not allow subnational governments to give tax credits, deferrals, and exemptions from taxes, because this may lead to erosions of otherwise important tax bases.

An issue of increasing importance especially in high-income countries is that sub-national governments compete in offering potential investors in-kind benefits such as infrastructure improvements etc. This is often used as a substitute for tax credits when they are restricted, or as an additional incentive for investors. It does not affect the revenue side but expenditures. Of course, fiscal federalism aims at securing a high degree of competititon among sub-national governments but competition of this type may have to be limited in order to offer a level playing field: not only those regions with relatively strong financial resources should be able to attract investments.

In OECD countries the mix of sub-national tax revenue varies substantially (Table 3). In many countries property taxes have high importance (e.g. anglo-saxon and French speaking countries, Spain, Italy and several central Eastern European ones), and almost everywhere consumption taxes are a less important revenue source, except in the US.[12] But there is no clear trend development regarding the relative weight of income taxes versus property taxes. Considering the disadvantages of both types of taxes one may argue that an approximate equal weight of both, which is about the average for federal and unitary OECD countries, could be a reasonable approach. The table also shows the relatively low local own-source revenues from taxes in Russia.

[11] Autonomy of sub-national governments in this regard caused, for instance, high rates of the personal income tax in Denmark and Sweden, leading to distorted labor supply decisions. Regarding the enterprise profit tax a problem is, of course, its relatively high revenue volatility. Surcharges on sales taxes caused inefficient inter-state trade in the US.

[12] The US have a sales tax, whose tax rates are determined by regions but no VAT. All other countries have a VAT.

Table 3-1
Revenue Autonomy of Local Governments in Selected Countries

	Own-source revenues in % of total local revenues 1/	Composition of own-source revenues			
		Non-Tax 1/	Income and profit taxes	Property taxes	Consump-tion taxes
Federal Countries	**53**	**28**	**12**	**10**	**3**
Austria	50	42	0	3	3
Belgium	47	8	16	17	5
Germany	55	39	11	5	0
Mexico	22	22	0	0	0
Switzerland	82	33	42	7	0
United States	62	21	2	30	9
Russia 2001	*ca. 15*	*n.a.*	*ca. 1.5*	*ca. 10.9 2/*	*ca. 1.5*
Estimate for after reforms, i.e. starting 2004	*ca. 5*	*n.a.*	*ca. 1.5*	*ca. 3*	*ca. 0.3*
Unitary Countries	**48**	**20**	**12**	**12**	**1**
Czech Republic	25	20	0	5	0
Denmark	57	10	45	2	0
Finland	67	32	33	2	0
France	71	17	n.a.	21	n.a.
Hungary	29	23	0	1	5
Ireland	37	21	0	16	0
Italy	39	14	0	15	0
Netherlands	28	20	0	5	3
New Zealand	89	36	0	52	1
Norway	18	17	0	1	0
Poland	50	33	0	14	3
Spain	57	15	10	21	6
Sweden	82	12	70	0	0
United Kingdom	28	16	0	11	0

1/ Excludes transfers.

2/ Comprises land tax (1.8 %) and housing stock and social infrastructure maintenance tax (9.1%).

Sources: Wetzel (2004), p. 18., Center for Fiscal Policy (2001), p.6, Martinez-Vazquez and Timofeev (2003), and own estimates. Data are for 1995 if not otherwise indicated.

Friedrich et al. (2003) argue that that fiscal autonomy of local governments can be protected through conditional grants, which are widely used in western Europan countries. But grants are not own-source revenues that can be adjusted at the margin by sub-national governments. In addition, the central government controls at least the grant conditions.

In sum, a good model of financing sub-national governments, especially local governments, that proved its practical value is an open issue.

4 Empirical evidence of Russia's system of fiscal federalism

4.1 Brief overview of regional inequalities

To give an impression of regional inequalities and characteristics, in Figure 1, panel 1 and 2, all 89 regions except Chechnya[13] are ranked according to per capita income. The regions shown in panel 1 are the lower per capita income half of all regions (in the following: 'lower income half' or 'poorer regions') and the regions shown in panel 2 are the upper per capita income half (in the following: 'upper income half' or 'wealthier regions'). As can be seen, the distribution of per capita income in Russia is extremely unequal: In 2002 the six regions with highest per capita income had a share in Russia's GDP of nearly 40%, they raised 34% of all tax revenues and 67% of tax revenues from extraction of natural ressources. Also shown is the unenployment rate. The highest unemployment rates can be found among the poorest regions, although there are several relatively wealthy regions that also have unemployment rates above the national average. The average unemployment rate in 2002 was for the lower income half 11% and for the upper income half 8.3%.

Since natural ressource wealth is an important element in Russia's system of fiscal federalism, the ratio of tax revenues from natural ressources extraction to GDP is also shown. It can be interpreted as one measure of fiscal autonomy but also of fiscal dependency on natural ressources extraction. This ratio is on average clearly higher among the relatively wealthy regions, although there are many regions in the upper income half that do not have significant revenues from this source.

Finally, the average ratios during 1996-2002 of total tax revenues collected to GDP are shown. This ratio was somewhat higher on average for the upper income half of all regions than for the lower income half (during the period 1996-2002 it was on average 19% for the regions shown in panel 1 and 22% for the regions shown in panel 2). Surprisingly, however, there are four relatively poor regions with very high tax revenue to GDP ratios above 30% (Ingushskaja republic, Aginsky Burjatskij AO, Mordovia republic, and Altai republic). When eliminating these four regions from the group of regions in the lower income half, then this group had on average a substantially lower tax revenue to GDP ratio than the regions in the upper income half.

---

[13] Chechnya is excluded from all calculations due to data availability and problems caused by the war.

In sum, the distribution of regional GDP is extremely unequal and the averages for the two defined groups of regions show marked differences, such as a higher unemployment rate, a lower tax revenue to GDP ratio, and a lower ratio of tax revenues from natural ressource extraction to GDP in the poorer regions, all of which may call for a redistribution of income. However, there are several exceptions to these observations.

4.2 Equalization of income disparities among regions

The following descriptive analysis can be based only on the past using the data 1996-2003 and it shows some anomalities. Recently reforms of the old system of equalization were implemented. But even they have weaknesses, which are discussed, and which may cause a continuation of the anomalities unless they will be further amended. Therefore this description of the past has importance for current policies.

a) Has the system of intergovernmental fiscal relations provided for a positive effective degree of equalization of income between regions?

To simplify the analysis, Russia's system of fiscal equalization can be regarded as a two step redistributive system: In the first step the regions pay a part of collected tax revenues to the central government and in the second and final step they receive transfers. All transfers received from any governmental fund and any additional payment made by the regions to the central government are combined in this second step. Therefore the transfers of the second step of fiscal equalization are denoted 'net transfers received'.

The part of collected tax revenues, which the regions have to transfer to the central government, can be considered a tax on regional tax revenues levied by the central government. Dividing the tax revenues passed on to the central government by total regional tax revenues gives the "tax rate" on tax revenues. Since there is no "tax free amount" and no progressive "tax schedule", this average tax rate is also a "marginal tax rate" paid by the regions on additional tax revenues. It is denoted MTR1 in figure 2. In other words, this rate says which part of one additional tax unit raised by a region has to be passed on to the central government.

If regions have some power to influence tax revenues, for instance through increasing their tax base, this tax rate provides some information about their incentives to raise additional tax revenues. Figure 2, panel 1 and 2, show that there is no tendency for MTR1 to be dependent upon per capita income: In the period 1996-2002 MTR1 was on average 39% for the lower income group of regions and 38% for the higher income group. Thus the fiscal equalization system did not use this tax rate MTR1 as a policy instrument to redistribute income from wealthy regions to poor regions. Also the level of this tax rate, namely 20% to 45% for most regions may be considered to be in an range that was not so high that it could be expected to cause very strong disincentives to raise tax revenues. But the figure reveals a special characteristic of the system, namely that this tax rate was highly positively correlated with the ratio of tax revenues to GDP. (The correlation coefficient for the period 1996-2002 is .79). In other words, the higher the ratio of tax revenues to GDP, the higher tended to be the tax rate on these tax revenues. This, of course, means per se that raising additional tax revenues is "punished" and it is a disincentive to raise revenues.

Since the first step of fiscal equalization (setting MTR1) did not incorporate an apparent redistributive element, the second and final step must have provided for redistribution, if the system intended to redistribute income from relatively wealthy to relatively poor regions. And indeed Figure 2, panel 1 and 2, shows that the ratio of net transfers received to GDP was on average significantly higher for the regions of the lower income half (panel 1) than it was for the upper income half regions (panel 2). The former group received on average during 1996-2002 net transfers in the amount of 10% of GDP whereas the latter group received 6% of GDP. The regions in the medium per capita income range received very low net transfers with few exceptions. Hence, fiscal equalization has been redistributive. However, there are several regions in the upper income group that received very substantial net transfers relative to their GDP (Figure 2, panel 2). This, of course, mitigates the redistributive effect of the fiscal equalization system.

Deducting the net transfers received in the second round of fiscal equalization from the tax revenues passed on to the central government in the first round gives a net figure of payments to the center. It can be negative if all transfers received are higher than payments made. Dividing these net payments by total regional collected tax revenues yields a net tax rate on tax revenues, called MTR2. Like MTR1 it is an average and marginal tax rate. Figure 3, panel 1 and 2, shows that for the poorest regions MTR2 has been mostly highly negative, and for all other regions it has been mostly highly positive but there are several exceptions and, surprisingly, some regions with relatively very high income had highly negative tax ratios. During 1996-2003 MTR2 was on average for the regions of the lower income half -.28% and for the upper income half regions 12%. This confirms the overall effective redistributive function of the system but, of course, there are quantitatively important outliers.

Another way to evaluate the effectiveness of redistribution of the system is to compare the per capita income position of individual regions relative to the national average before and after fiscal equalization. Figure 4 shows this for the averages of the years 1996-2003. It becomes clear that several relatively wealthy regions with per capita tax revenues substantially above the national average *before* fiscal equalization had even higher per capita revenues in percent of the national average *after* fiscal equalization. These regions (Chukotskij AO, Evenkijskij AO, Korjakskij AO, Tajmyrskij AO, Magadanskaja oblast, Sakha-Jakutia Republic and Kamchatskaja oblast) can be found in area I, i.e. to the left of the 'line of neutrality of the fiscal equalization system' (which is the locus for regions whose income is unaffected by the equalization system) and above the 'line of complete fiscal equalization' (which is the locus of regions whose income is equal to national average after equalization). Figures 4.1-4.8 in the appendix show these relative positions of all regions before and after equalization for each of the considered years.

The relative income position of several of the relatively very wealthy regions was substantially improved. An extreme example is Korjakskij AO, whose relative income position was raised in 2003 from 184% of national income before fiscal equalization to 400% after equalization (Figure 4.8, appendix). And also in all other considered years this relatively wealthy region received strong financial support. The figures also show that other very wealthy regions were only relatively mildly burdened by the equalization system.

Moreover, many regions with per capita tax revenues below the national average before fiscal equalization were even put further below the national average after fiscal equalization. These latter regions can be found in the area IV of figure 4, which is the area below the 'line of complete fiscal equalization' and to the right of the 'line of neutrality of fiscal equalization' (e.g. Sankt-Peterburg and Lipeckaja oblast). Surprisingly the number of regions increased that were located in this particular area IV from 26 in 2000 to 45 in 2003 and this was the largest number in all considered years (Figure 4.8, appendix).

Thus, Russia's system of fiscal equalization resulted in many regions located in the two discussed problematic graphical areas I and IV. Good arguments would be needed to justify this, but an analysis of the background of each of these individual cases is beyond the scope of this paper.

Thus, from this descriptive evaluation we can infer that for the period considered there has been an effective redistribution of income to regions with relatively low per capita income but since several of the regions in the top income group received substantial net transfers it was mainly the medium income group of regions that carried the burden for this redistribution. In addition, there has been a growing number of regions with per capita income below national average before fiscal equalization whose relative income position even deteriorated through fiscal redistribution.

b) Has fiscal equalization caused significant disincentive effects for subnational governments?

A redistribution of income always entails the risk of causing adverse incentives. In the case of fiscal equalization among regions, one needs to ask whether the system may have caused disincentives for subnational governments to improve regional economic growth, the own tax base, and the efficiency of both administration and expenditures. Incentive effects provided by the fiscal equalization system may best be analyzed through panel regression analysis. It may shed light on the quantitative influence of the equalization system on regional economic growth, tax revenues, and administrative costs.[14] This regression analysis is beyond the scope of this paper but it is proposed to be performed in additional work: The available data basis and the possibility to augment it through appropriate control variables enable us to gain potentially powerful insights (i.e. quantitative estimates) regarding the economic effects of the fiscal equalization system.

In the absence of this proposed regression analysis we may base our evaluation of incentive effects on examining the two measures of marginal tax rates (MTR1 and MTR2) we have compiled. In standard economic analysis of incentive effects, marginal tax rates are a very important variable determining incentives for proper economic behavior. In Figure 2, panel 1 and 2, we have seen that MTR1, the burden on regional tax revenues in "the first round of fiscal equalization" is for most regions within a corridor of 20% to 45%, which may suggest

[14] In such an analysis variables need to be defined that capture the influence of the fiscal equalization system on outcomes such as annual per capita regional economic growth. Empirical research of this type is very new and scarce. Variables used in these few papers as proxies for the influence of the equalization system have been the volume of fiscal equalization and the marginal tax rate MTR2 discussed above (Baretti, Huber, and Lichtblau, 2002, Thießen, 2004), and, in a study on Canada, year dummies intended to measure the effect of a reform of the equalization system on tax revenues in the years immediately following the reform (Snoddon, 2003).

that the burden in this phase of fiscal equalization may not have been unjustifiably or 'prohibitively' high.[15]

But the discussed high positive correlation between tax revenue to GDP ratios and MTR1 during 1996-2003 may suggest that there have been strong disincentives for regions to increase their tax base for instance through measures to become more attractive to companies and other tax payers, because higher tax revenues resulted, on average, in higher shares of these revenues to be transferred to the central government. At the same time the ratio of net transfers received to GDP was not highly positively correlated with the ratio of tax revenues to GDP. (The correlation coefficient of the averages during 1996-2003 was merely .11). This means that raising the ratio of tax revenues to GDP was not rewarded by a relatively high ratio of transfers received to GDP, although there are a few exceptions among the relatively poor regions (Ingushskaja republic, Aginskij Burjatskij AO, Altaij republic), and one exception among the wealthiest regions (Chukotskij AO).

However, the net result of regional payments and received transfers relative to tax revenues is given by MTR2, which is the average and marginal tax rate on tax revenues after completion of fiscal equalization (Figure 3, panel 1 and 2). Those regions with a negative MTR2 were the net recipients in the equalization system and those with a positive MTR2 were the net contributors. The extent of subsidization or burdening of regions is shown in terms of ratios to regional tax revenues. As can be seen, the relatively poor regions in the lowest income fifth of all regions were mostly net recipients of ressources. There is a clear upward trend of the average tax rate MTR2 during 1996-2003 in figure 3, as per capita income of the regions rises, but there are some exceptions (i.e. regions in the upper per capita income half that have a negative average MTR2, such as oblasts Kemerovskaja, Amurskaja, and Kamchatskaja) and, surprisingly, four of the regions in the top ten per capita income group had a highly negative average MTR2 (Magadankskaja oblast, Sakha-Jakutia republic, Korjakskij AO, Chukotskij AO). Thus, these relatively wealthy regions were even net recipients in the system.

In sum this descriptive analysis suggests that although there has been an effective redistribution of ressources to relatively poor regions, the incentives provided by the fiscal

---

[15] There were, however, 8 regions whose average MTR1 during 1996-2003 reached 50% or more, and four of these regions fell in the lowest income fifth of all regions. It could be possible that these regions interpret the relatively high MTR1 they face as unfair treatment despite the relatively high ratios of tax revenues to GDP they all had.

equalization system for regions to improve their tax base and raise tax revenues may have been inhibited, because such efforts would tend to result in a higher share of tax revenues to be transferred to the central government and no significant increase in net transfers received relative to GDP. Also the fact that several very wealthy regions were persistently subsidized through the system on a net basis may have resulted in perceived unfair treatment especially by the many middle and higher per capita income regions that faced a relatively high net burden of up to 50% of their tax revenues.

c) The transfer system should be based on transparent rules, which consider the potential rather than the actual revenue-raising capacity.

Russia has already for many years used state of the art formulas for calculating fiscal equalization transfers from the central government to regional governments (such as the federal fund for support to the regions, abbreviated in Russian "FFPR"): they consider not only potential fiscal capacity but also the regionally different costs of supplying public goods and services through use of an "expenditure needs index" (Kurlyandskaya, 2005b).[16] However, although these formulas appear to be even more advanced than the schemes used in OECD countries, the previous sections showed that despite the objectivity of these formulas there have been anomalies. This may confirm reports that despite the objectivity of the used methodology, some bargaining over transfers and fiscal relations between the center and regions continued (e.g Wetzel, 2004, Solanko and Tekoniemi, 2005). It has also been argued that significant unofficial transfers continue to exist (Solanko and Tekoniemi, 2005). This, however, cannot explain the anomalities of fiscal equalization outcomes shown above, because the data used in this paper do not include unofficial transfers.

In addition, there may be a problem with regard to the stability of this system, because the formulas may be adjusted. Should these adjustments become substantial, the character of the system could change, namely away from being rules-based and transparant back to the old system of discretion and ad hoc measures.

The new rules introduced recently have changed the fiscal equalization system, since regional governments were mandated to administer equalization funds that address horizontal differences among the local governments. A new and reasonable distinction was introduced

[16] The Ministry of Finance publishes the methodology of these formulas. An English translation has not yet been published. See: *http://www.minfin.ru/fvr/mo_2005/ffpr2005.zip*. There has been, however, criticism of the formulas in that they do not give regions sufficient incentives to increase their fiscal efforts and develop their tax bases. See Valitova (2005).

between two groups of local governments, i.e. the district level (local governments with stronger population and higher administrative capacities) and the settlement level (local governments usually in rural areas with smaller population and smaller administrative capacity). But the specifics for calculating these equalization transfers were not defined. Only general principles such as population size and fiscal capacity were made mandatory elements to be considered in the calculations. It is surprising that an explicit formula is lacking because of Russia's experience with the use of highly advanced formulas to determine equalization transfers. Together with considerable technical demands on regions to administer the new equalization transfers this lack may facilitate unwanted bargaining.

4.3 Distribution of expenditure responsibilities

Regarding expenditure responsibilities, the comprehensive reforms of fiscal federalism implemented following the 'Kozak' commission proposals brought improvements of four main types:

- Responsibility assignments were clarified particularly concerning the relation between the federal level, on the one hand, and regional and local governments, on the other.
- A distinction between 'delegated' and 'own' responsibilities was made with the implication that the government level that is delegating must provide sufficient financing shown in the budgets (of the central and regional governments). Concerning own responsibilities, the respective higher level of government is not allowed to regulate expenditure levels or procedures.
- Unfunded expenditure mandates were abolished.
- Some important expenditure responsibilties were re-assigned with the new assignments closely corresponding to the principles outlined in section 2 and to table 1.

Although full implemenation of these reforms would require further adjustments of many laws and adherence to the reforms was seriously impaired in 2005 following the impossibility for regions to implement the 'law on monetization of social benefits', the following evaluation must be based on the new rules.

a) The assignment of expenditure responsibilities should be clearcut and follow the subsidiarity principle.

The new order of assignments (detailled surveys are offered by Martinez-Vazquez and Timofeev, 2003, and Kurlandskaya, 2004b) includes an exclusive list of "own" responsibilities of subnational governments, i.e. regional and local ones, and it adheres closely to the subsidiarity principle: Many expenditure responsibilities formerly carried out by the central government were given to regional (R) and/or local governments (L) such as wage regulation in public sector (R and L), fire protection (R and L), social benefits to disabled (R), allowances to families with children (R), wich is a major new burden for regional budgets, vocational education (R), preschool education (L), specialized (R) and general healthcare (L), and even subsidies to agriculture (R). By contrast, many expenditure responsibilties formerly given to regional and/or local governments were assigned in accordance with theory and the subsidiarity principle to the central level such as higher education, R&D in healthcare and expensive health treatment, fundamental research, army recruiting, benefits for federal government officials, subsidies to private enterprises except agriculture, social benefits to veterans and Chernobyl victims.

There appear to be no more overlapping expenditure assignments, also not between regions and local governments. If some should exist, a further clarification regarding the questions which level regulates, finances and delivers the service would be needed. However, there is an obvious problem with setting up a closed list of government responsibilities, since it may not be possible to define them exhaustively.

b) Local governments should have the expenditure responsibility for all those public goods and services in the allocation branch, which may be assumed to have significant differences in demand in different localities and which are not associated with considerable spillovers.

Several of the services that have been assigned to local governments are associated with important spillovers such as basic health care, basic education, and other specific infrastructure. Vazquez and Timoffeev (2003) argued that clear rules would be needed to ensure that necessary rationalizations of these services are carried out and coordinated. This refers to coordination among local governments, on the one hand, and coordination between local and regional governments, on the other.

c) **The efficiency of the fulfillment of responsibilities should be regularly and automatically assessed based, for instance, on national and international comparisons.**

A regular evaluation of responsibility fulfillment through such measures as performance indicators, including measures of the cost-effectiveness of service delivery, was not explicitly included in the reforms of fiscal federalism. But it would not be missing provided it is included in the administrative reforms. It would be an important aspect of ensuring public sector efficiency. Regarding the important services of education, measures of efficiency cannot, however, mean that labor productivity figures are used, because this sector achieves its results by the quality of knowledge transfered to students where lower labor productivity (less students per teacher) may mean better outcomes.

In sum, the reforms of expenditure assignments are consistent with our evaluative norms and there appear to be only few areas for further improvements: These concern the introduction of an institution that ensures better coordination among the government levels, especially decisions regarding public goods and services with important spillovers, and the introduction of regular assessments of responsibility fulfillment through use of performance indicators.

4.4 Assignment of revenue sources

Insufficient "own" revenue sources for regional and local governments was identified as a major weakness of fiscal federalism and as a hindrance for the system to promote sustained nationwide economic growth (e.g. Zhuravskaya, 2000, Martinez-Vazquez and Boex, 2001).[17] Notably, the analyses agree that granting regional and local governments the right to raise and determine their own revenues should be an integral part of a reform of inter-governmental relations. Also the Kozak Commission recommendations stressed the importance of properly financing the newly defined responsibilities of each level of government. But earlier, since about 2001, a tax reform was begun, consistent with economic theory, that simplified the tax

[17] Major contradictions between the rules set in relevant laws and the actual sharing of tax revenues continued throughout the 1990s. Regions kept either parts of revenues from taxes, which were exclusively assigned to the federal government (e.g. VAT), or they retained tax revenues they collected partly or even in full and negotiated a single payment with the federal government (Zhuravskaya, 2000, Martinez-Vazquez and Boex, 2001). The importance of political factors and bargaining power in determining net revenues of both regional and local governments has been analyzed and confirmed in these and many other studies (e.g. Treisman, 1996 and 1998, and Popov, 2002), and they emphasize the resulting economic problems such as disincentives for tax collections and for providing infrastructure for business development, and insufficient responsibilities for expenditures.

system by reducing the number of taxes, tax rates and by broadening the base.[18] Perhaps this may contribute to explain why the reforms implemented show serious problems concerning the financing of lower levels of government.[19] However, there does not have to be a conflict between the goals of a simple and growth promoting tax system and to provide sufficient financing for the functions of each level of government including sufficient freedom for them to adjust own revenues. There is an additional reason, besides the needed improvement of incentives for regions to behave consistently growth promoting, as to why Russia needs regional fiscal autonomy: Russia's regions are relatively heavily exposed to regional income shocks due to the uneven distribution of both natural ressources and industry, relatively low labor mobility, and procyclical regional fiscal policy (Kwon and Spilimbergo, 2004). To counteract these shocks and promote some countercyclical regional fiscal policy, regions would need more fiscal freedom.

a) **Lower levels of government should have significant own revenues determined within limits by themselves so as to provide them the opportunity to adjust their revenues at the margin.**

As shown by table 4, there are relatively few taxes, where subnational governments have influence on tax rates and thus on their own-source revenues. Most importantly, the most productive taxes, i.e. the VAT, the personal income tax, and the enterprise profit tax, are solely controlled by the central government.

Thus, the revenue assignments lack a very important element, i.e. significant revenue discretion given to subnational governments and thus enabling them to adjust own-revenues at the margin.

Regarding regional governments, although they participate in many and partly also productive tax revenues, the sharing arrangements consider this discretion only for few and less productive taxes and within very narrow limits. For local governments, the assigned own-

[18] The tax reform started with a reform of the personal income tax in 2001 that included a drastic tax rate reduction to a 13% flat tax rate (Ivanova, Keen, and Klemm, 2005) and continued through 2004 when the sales tax was abolished, whose revenues had been assigned to the regions.

[19] The share of sub-national government revenues, excluding transfers, in total government revenues declined since 1998 from more than 50% to about 40% in 2004. Only due to rising real tax revenues as a result of strong economic growth and perhaps also due to the tax reforms the fiscal balances of regional governments improved and even became balanced or surpluses in many regions. The order in 2004/2005 for regions to replace in-kind social benefits by cash payments reversed these improvements sharply since the estimates of the central government of the resulting regional social benefit expenditures were grossly underestimated.

revenues include merely five unproductive taxes and their ability to make adjustments of own-revenues is negligible.

It is striking that with one exception (the gambling tax), no use is made of allowing regional governments and possibly also local governments to levy limited surcharges on productive taxes such as the income tax, profit tax and excises. This could be a very reasonable way to give subnational governments revenue discretion and autonomy, which would also be a precondition for making them accountable. Bird (2003) suggested as a way to improve "own" revenues of subnational governments while simultaneoulsy improving the allocative efficiency of sub-national revenues the introduction of a "business value tax", which is a relatively low rate flat tax levied on an income type value added base. Given that property taxes are unlikely to yield significant revenues for years to come, this innovative proposal, should receive attention.

Table 4-1
Russia: Distribution of Taxes and Fees Among the Government Levels 1/

Specific Tax	**Tax imposed by 2/**	**Tax base determined by 2/**	**Tax rate determined by 2/**	**Revenue distribution 3/**	**Principle used for revenue split 4/**
Federal taxes and fees					
Enterprise profit tax	F	F	F (since 2005, rate is 24%)	F (27%), R + L (73%)	since 2005: S, previously: P
Simplified system of taxation	F	F	F	F (30%), R (15%), L (45%), Social security 5%, Medical insurance funds 5%	S
VAT	F	F	F	F (100%)	
Excise taxes (all except other excises)	F	F	F	F (100%)	
Excise taxes on certain alcohol	F	F	F	F (50%), R (50%)	S
Excise taxes on gasoline and diesel	F	F	F	F (40%), R (60%)	S
Export duty for oil products	F	F	F	F (100%)	
Tax on extraction of hydrocarbons	F	F	F	since 2005: F (95%), R (5%)	S
Tax on extraction of non-common natural resources (e.g. precious metals etc.)	F	F	F	F (40%), R (60%)	S
Water tax	F	F	F (R within limits set by F)	F (40%), R (60%)	S
Ecological tax (tax on hazardous emissions)	F	F	F	F (19%), R (81%)	S
Customs duty and fees	F	F	F	F (100%)	
Stamp duty (concerning highest courts and arbitration courts)	F	F	F	F (100%)	
Federal license fees	F	F	F	F (100%)	
Gambling tax	F	F	F, R	F (a certain minimum amount set by F) + R (excess amount)	P
Payments for use of sub-soil resources under PSA agreements	F	F	F	Distribution defined by PSA	
Unified social tax	F	F	F	distributed to social insurances	
Regional taxes and fees					
Enterprises assets tax	F	F	R (limits set by F)	R (50%), L (50%) defined by annual budget legislation.	S
Personal income tax	F	F	F	R (100%)	
Unified agricultural tax	R	F	R (limits set by F)	F (30%), R (60%), Social security 6.4%, Medical insurance funds 3.6%	S
Tax on extraction of 'common natural resources' (except hydrocarbons, precious metals etc.)	F	F	F	R (100%)	

Specific Tax	**Tax imposed by 2/**	**Tax base determined by 2/**	**Tax rate determined by 2/**	**Revenue distribution 3/**	**Principle used for revenue split 4/**
Transport tax	R	F	R (limits set by F)	R (100%)	
Forest tax	F	F	R (minimum rate set by F)	R (all revenues from minimum rate plus 50% of exceess) F (50% of excess)	S
Fee for needs of educational institutions	R	F	R	R (100%)	
Stamp duty (except those of the federal government)	R	R	R	R (100%)	
Local taxes and fees					
Land tax	F	F	L (rate of orientation given by F)	R (50%) L (50%)	S
Personal property tax	F	F	L (limits set by F)	L (100%)	
Inheritance and gift tax	F	F	F	L (100%)	
Resort fee	L	F	L (limits set by F)	L (100%)	
Tax on imputed income of enterprises carrying out outdoor advertising	F	F	F	L (100%)	

1/ The public finance literature defines "own-source" revenues as those over which a government has control in either setting the base or the rate of the tax or both. In this table, taxes that are fully determined by the central government but whose revenues are received 100% by another level of government are shown as taxes of the government level receiving the revenues to highlight the revenue aspect.

2/ F denotes the federal level, R denotes the regional level, and L denotes the local level. (F) denotes that the regional or local government determines the tax rate but within **limits** set by the the federal government.

3/ The numbers in brackets give the shares for the central, regional, and local level.

4/ Principle used to determine the split of tax revenues among government levels: S denotes taxes that are shared. P denotes taxes where lower levels of government may levy a surcharge on the tax rate imposed by the central government (piggybacking principle).

Sources: Federal Law "On basic principles of tax system"; Tax Code of the Russian Federation, Federal Law of August 2004; Center for Fiscal Policy, "Federal, regional, and local taxes", Moscow, Russia, *http://english.fpcenter.ru/themes/english/materials-document*, and Andreeva and Golovanova (2003), p. 18.

b) The revenue sources granted to subnational governments should be sufficient to cover their expenditure responsibilities.

A new substantial financing problem appeared as a result of the underestimation by the central government of social expenditures of regional governments when the law on monetization of benefits required regions to replace in-kind benefits by cash-payments. Assuming that a solution may be found to this problem, for instance through a combination of further reductions of the benefits and additional earmarked transfers from the central government, the sufficiency of own-revenues for regional governments may be adequate. For local governments a serious problem is that their own-revenue sources include merely five relatively unproductive taxes, and thus they are grossly insufficient (as shown also in table 3) making local governments fully dependent on transfers.

c) Taxes levied by subnational governments should not concern the relatively mobile factors of production with the exception of surcharges, for instance levied on the personal income tax, which they should be allowed to levy within limits.

Most of the tax revenues assigned to subnational governments are levied on relatively immobile factors (e.g. property taxes, land tax, agricultral tax). However, with the exception of the gambling tax, surcharges are absent.

d) Natural resources (although immobile) should be taxed by the central government.

The central government fully determines all of the taxes on natural resource extraction. Regions receive only 5% of the revenues from taxes on oil and gas production, which can be justified with redistributive arguments and with the savings of a large part of these revenues in the stabilization fund. The latter is a reasonable way to avoid too strong real currency appreciation of the Ruble that would inhibit the development of non-oil industry.

e) The revenue sources should increase together with the responsibilities without a significant time lag.

Further shifts in the responsibility assignments may be unlikely since they are well designed and clearcut. However, since the quality and quantity of most services will probably be expected by residents to increase with rising living standards, total real expenditures may need to increase. Since particularly local governments have almost no discretion in adjusting their revenues, this recommendation cannot be considered as being fulfilled.

f) The revenue sources should be relatively stable and predictable.

Looking only at the most productive tax revenues we find: the relatively stable and predictable VAT revenues are assigned to the central government and not shared. The more volatile and less predictable revenues from profit and income taxes are assigned mostly to regional governments (without any control over these taxes given to them).

5 Concluding remarks

Although the implemented reforms brought remarkable improvements regarding expenditure assignments and also partly concerning their financing, there may be significant flaws because the fiscal equalization that regional governments have to carry out to reduce horizontal inequalities among local governments may have weaknesses that invite bargaining. In addition, own-revenues of subnational regions that they can influence appear insufficient and local governments may even depend almost fully on transfers. Hence, the current alleged standstill in adherence to the reforms of fiscal federalism following the problems for many regions to implement the law on monetization of social benefits could be a chance to amend the reforms further as suggested. This should bring effective, growth promoting incentives to subnational governments, and beginning income convergence among regions.

References

Alexeev, M., and G. *Kurlyandskaya* (2003), "Fiscal federalism and incentives in a Russian region", Journal of Comparative Economics 31, pp. 20-33.

Andreeva, E., and N. *Golovanova* (2003), "Decentralization in the Russian Federation", mimiographed, Center for Fiscal Policy, Moscow, *http://english.fpcenter.ru/themes/english/materials-document*.

Baretti, C., B. *Huber*, and K. *Lichtblau* (2002), "A Tax on Tax Revenues. The Incentive Effects of Equalizing Transfers: Evidence from Germany." International Tax and Public Finance 9, pp. 631-649.

Bird, R.M., and C. *Wallich* (1993), "Fiscal Decentralization and Intergovernmental Relations in Transition Economies," World Bank Policy Research Working Papers 1122, Washington, D.C., March.

Bird, R.M. (2003), "Fiscal Federalism in Russia: A Canadian Perspective," Public Finance and Management 3 (4), pp. 1-32.

Boadway, R., and T. *Hobson* (1993), "Intergovernmental Fiscal Relations in Canada," Canadian Tax Paper 96, Canadian Tax Foundation, Toronto.

Center for Fiscal Policy (2001), "Explanatory Note to proposed assignment of taxing powers across levels of Russian government in the concept for reform of intergovernmental fiscal relations and subnational public finance in 2002-2005," mimiographed, Moscow, *http://english.fpcenter.ru/themes/english/materials-document*.

Edwards, J. and M. *Keen* (1996), "Tax Competition and Leviathan," European Economic Review 40, pp. 113-134.

Feldstein, M. and H. *Vaillant* (1994), "Can State Taxes Redistribute Income?" NBER Working Paper No. 4785.

Desai, R. M., *Freinkman*, L. M., and I. *Goldberg* (2003), "Fiscal Federalism and Regional Economic Growth. Evidence from the Russian Federation in the 1990s," World Bank Policy Research Working Paper 3138, September.

Friedrich, P., J. *Gwiazda*, and C. *Woon Nam* (2003), "Development of Local Public Finance in Europe," CESIFO Working Paper No. 1107, Munich, December.

Hines, J. (1999), "Lessons from Behavioral Responses to International Taxation," National Tax Journal 52, pp. 305-322.

Ivanova, A., M. *Keen*, and A. *Klemm* (2005), "The Russian Flat Tax Reform," Working Paper 16, International Monetary Fund, Washington D.C.

Joumard, I., and P.M. *Konigsrud* (2003), "Fiscal Relations across Levels of Governments," OECD Economic Studies, No. 36, Paris.

Kurlyandskaya, G. (2004a), "Is Russia Ready for New Federalism?", Presentation to the Gorbachev Foundation round table meeting on New Russian Federalism, 2 February, Moscow.

Kurlandskaya, G. (2004b), "Fiscal Federalism Reform in Russia: Clarifying Expenditure Assignments", World Bank, Washington D.C., May. *http://english.fpcenter.ru/themes/english/materials-document*.

Kurlyandskaya, G. (2005a), "Cash benefits put regions in fiscal bind," Moscow Times, February 8.

Kurlyandskaya, G. (2005b), "Equalization Transfers to Sub-national Governments in the Russian Federation," Center for Fiscal Policy, *http://english.fpcenter.ru/themes/english/ materials-document*.

Kwon, G. and A. *Spilimbergo* (2004), "Russia's Regions: Income Volatility, Labor Mobility and Fiscal Policy," IMF Country Report No. 04/316, Washington D.C., pp. 74-89.

Ladd, H. (1994), "Accounting to Fiscal Capacity and Fiscal Need in the Design of School Aid Formulas," in: J. E. *Anderson* (ed.), "Fiscal Equalization for State and Local Government Finance," New York.

Litwack, J. M. (2001), Central Control of Regional Budget: Theory with Applications to Russia, OECD Working Paper No. 275.

Martinez-Vazquez, J., and J. *Boex* (2001), Russia's Transition to a New Federalism, World Bank Institute, Washington D.C.

Martinez-Vazquez, J., and A. *Timofeev* (2003), "An assessemnt of the proposed sub-federal fiscal reforms in the Russian Federation (The Kozak Commission)," Andrew Young School of Policy Studies, Georgia State University, December.

Mc Lure, C. (1995), "The Revenue Assignment Problem: Conceptual and Administrative Considerations in Achieving Subnational Fiscal Autonomy," Institute for Policy Research Working Paper, Washington, D.C.

OECD (2003), Economic Outlook 74, Paris, pp. 144-159.

Popov, V. (2002), "Fiscal Federalism in Russia: Rules versus Electoral Politics," Institute of European and Russian Studies, Carleton University, Ontario, Working Paper, September.

Musgrave, R.A. (1959), The Theory of Public Finance, New York.

Musgrave, R.A., and P.B. Musgrave (1984), Public Finance in Theory and Practice. New York.

Sinn, H.-W. (1998), "European Integration and the Future of the Welfare State," Swedish Economic Policy Review 5, pp. 113-132.

Smart, M., and R. *Bird*, (1997), "Federal Fiscal Arrangements in Canada: An Analysis of Incentives," in: National Tax Association (1997), Proceedings of the Eighty-Ninth Annual Conference on Taxation 1996, Washington, D.C., pp. 1-10.

Smart, M. (1998), "Taxation and Deadweight Loss in a System of Intergovernmental Transfers," Canadian Journal of Economics 31, pp. 189-206.

Snoddon, T. (2003), "On Equlization and Incentives: An Empirical Assessment," School of Business and Economics, Laurier University, Waterloo, Working Paper 06-EC, May.

Solanko, L, and M. *Tekoniemi* (2005), "To recentralizae or decentralize – some recent trends in Russian fiscal federalism," Bank of Finland, Institute for Economies in Transition, Working Paper No. 5.

Thießen, U. (2004), "Fiscal Federalism in Transition: Evidence from Ukraine", Economics of Planning 37 (1), pp. 1-23.

Thießen, U. (2003), "Fiscal Decentralization and Economic Growth in High Income OECD Countries", Fiscal Studies 24 (3), pp. 237-274.

Treisman, D. (1996), "The Politics of Intergovernmental Transfers in Post-Soviet Russia," British Journal of Political Science 26, pp. 299-335.

Treisman, D. (1998), "Dechiphering Russia's Federal Finance: Fiscal Appeasement in 1995 and 1996." Europe-Asia Studies 50 (5), pp. 893-906.

Valitova, L. (2005), "The effect of federal supporting grants on the incentives of regional authorities." Unpublished manuscript, Russian European Center for Economic Policy (RECEP), Moscow.

Wetzel, D. (2004), "Fiscal Federalism in Russia: Progress and Challenges." World Bank Policy Notes, June, Washington D.C. *(http://siteresources.worldbank.org/intrussianfederation/resources/.../Fiscal_Federalism_Policy_Note_eng.pdf)*.

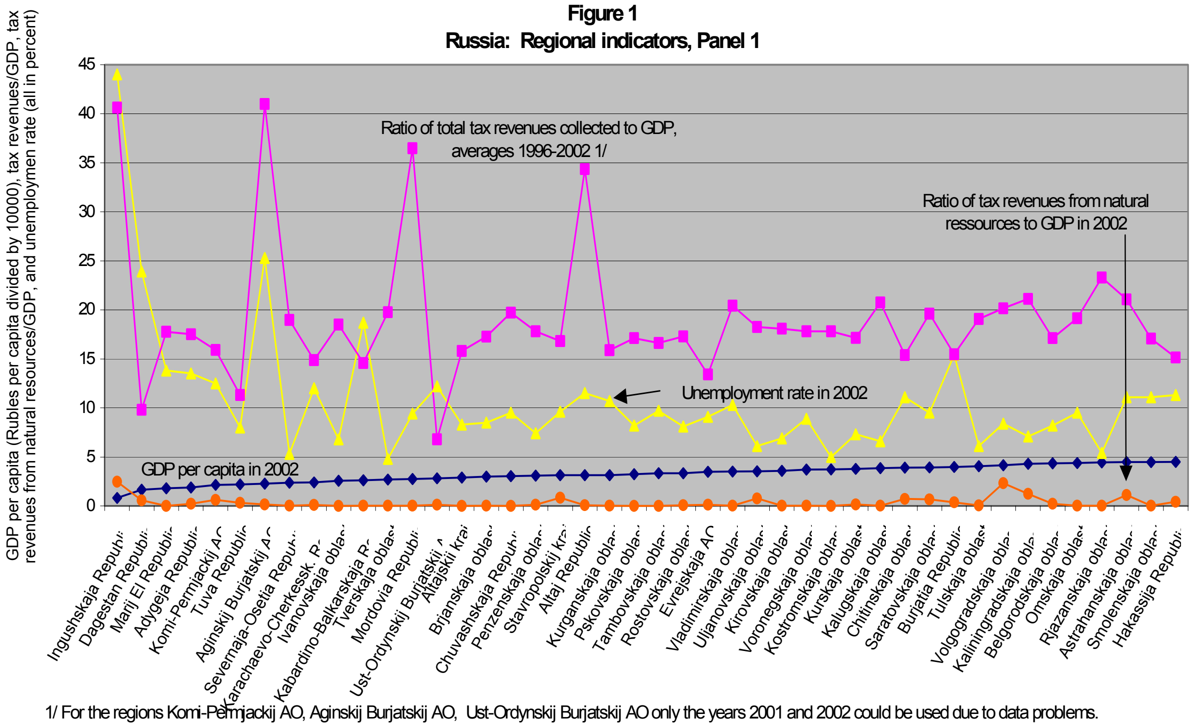
Wildasin, D. (1991), "Income Redistribution in a Common Labor Market," American Economic Review 81, pp. 757-774.

Zodrow, G., and P. *Mieszkowski* (1986), “Pigou, Tiebout, Property Taxation, and the Underprovision of Local Public Goods,” Journal of Urban Economics 19, pp. 356-370.

Zhuravskaya, K. (2000), “Incentives to provide local public goods: fiscal federalism, Russian style,” Journal of Public Economics 76 (3) , pp. 337-368.

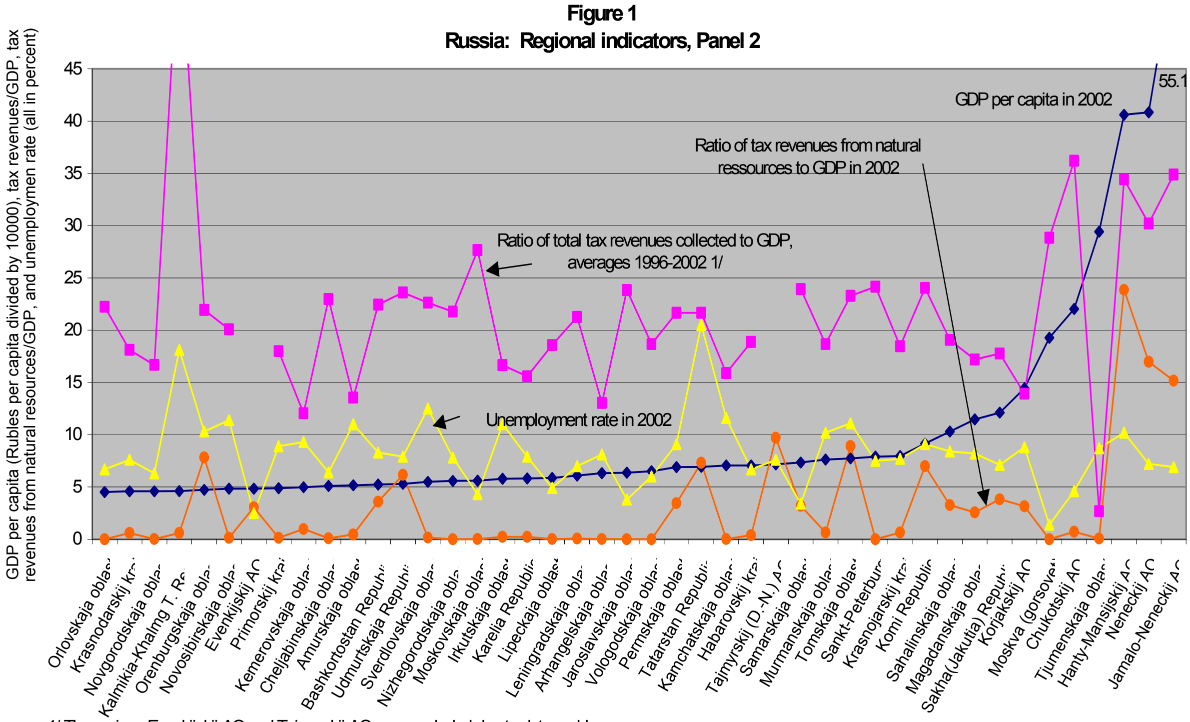
Appendix

Figure 1
Russia: Regional indicators, Panel 1



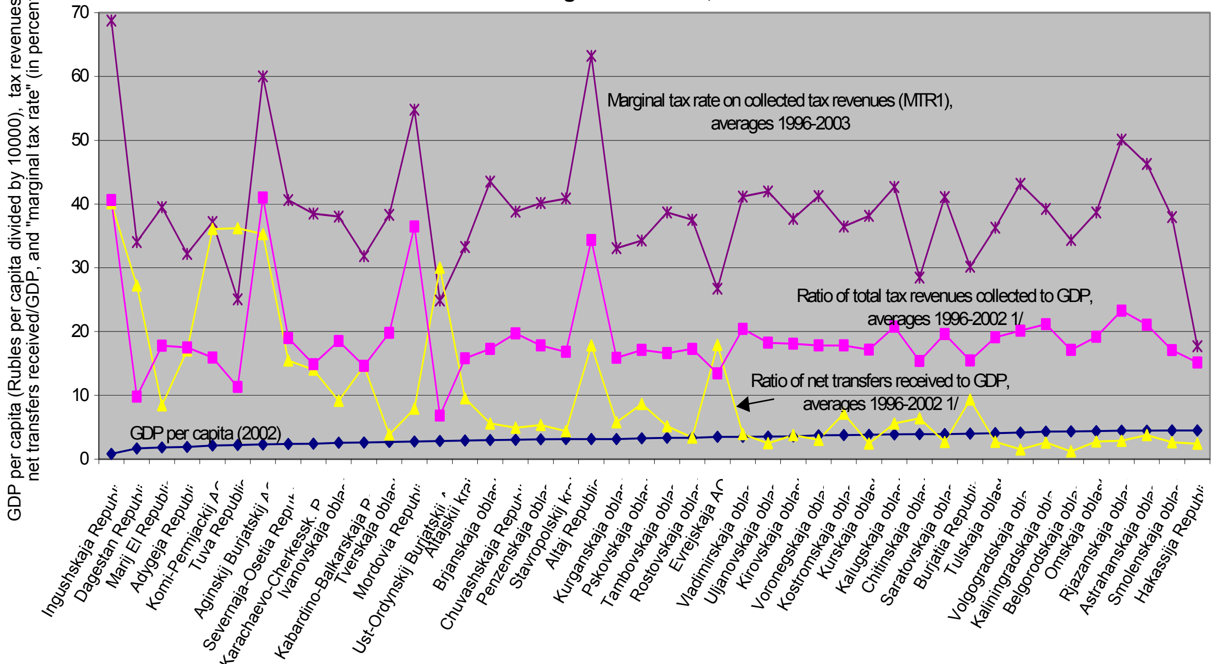
1/ For the regions Komi-Permjackij AO, Aginskij Burjatskij AO, Ust-Ordynskij Burjatskij AO only the years 2001 and 2002 could be used due to data problems.
Source: Goskomstat and Ministry of Finance.

Figure 1
Russia: Regional indicators, Panel 2



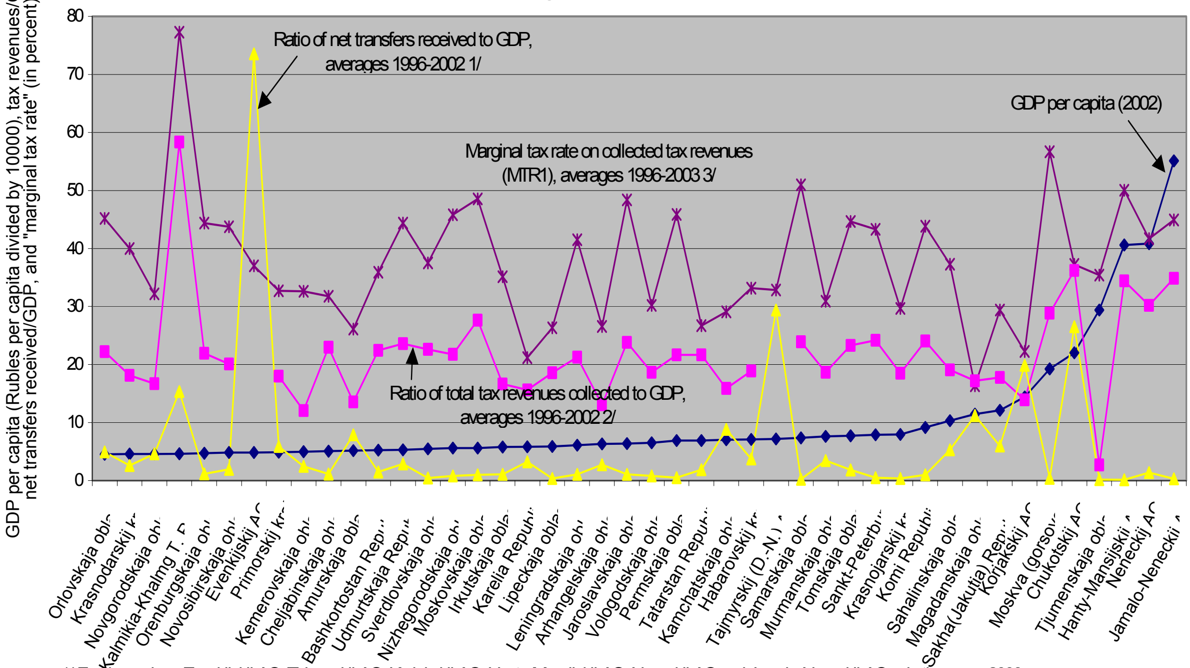
1/ The regions Evenkijskij AO and Tajmyrskij AO were excluded due to data problems.
Source: Goskomstat and Ministry of Finance.

Figure 2
Russia: Regional indicators, Panel 1



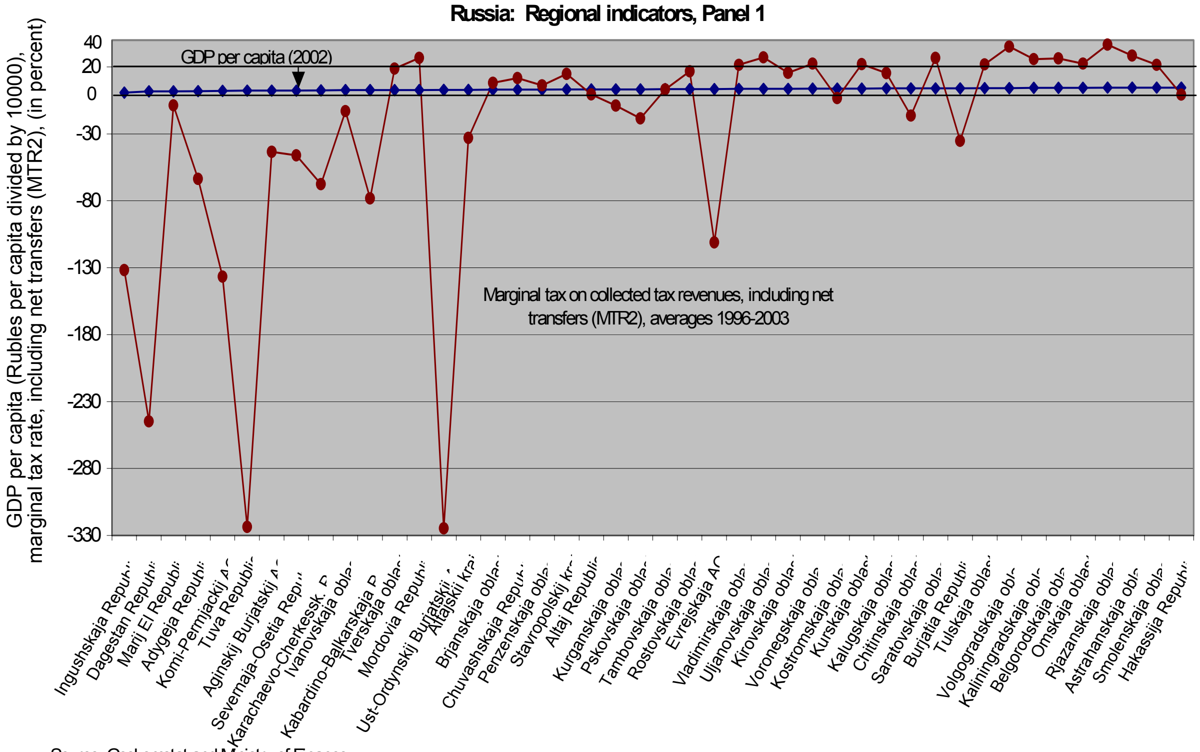
1/ For the regions Komi-Permjackij AO, Aginskij Burjatskij AO, Ust-Ordynskij Burjatskij AO only the years 2001 and 2002 could be used due to data problems. 2/ The regions Evenkijskij AO and Tajmyrskij AO were excluded due to data problems.
Source: Goskomstat and Ministry of Finance.

Figure 2
Russia: Regional indicators, Panel 2



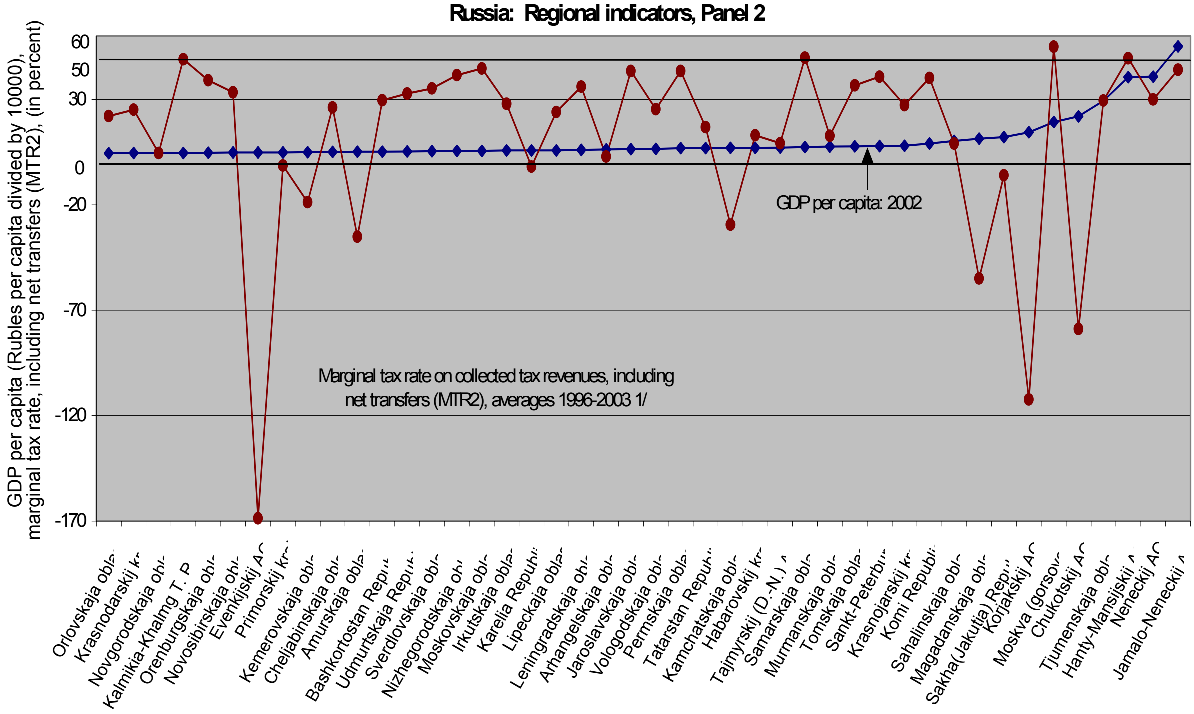
1/ For the regions Evenkijskij AO, Tajmyrskij AO, Korjakskij AO, Hanty-Mansijskij AO, Neneckij AO and Jamalo-Neneckij AO only the years 2000-2002 could be used due to data problems. 2/ The regions Evenkijskij AO and Tajmyrskij AO were excluded due to data problems. 3/ For the regions Evenkijskij AO and Tajmyrskij AO only the years 2001 and 2002 could be used due to data problems.
Source: Goskomstat and Ministry of Finance.

Figure 3
Russia: Regional indicators, Panel 1



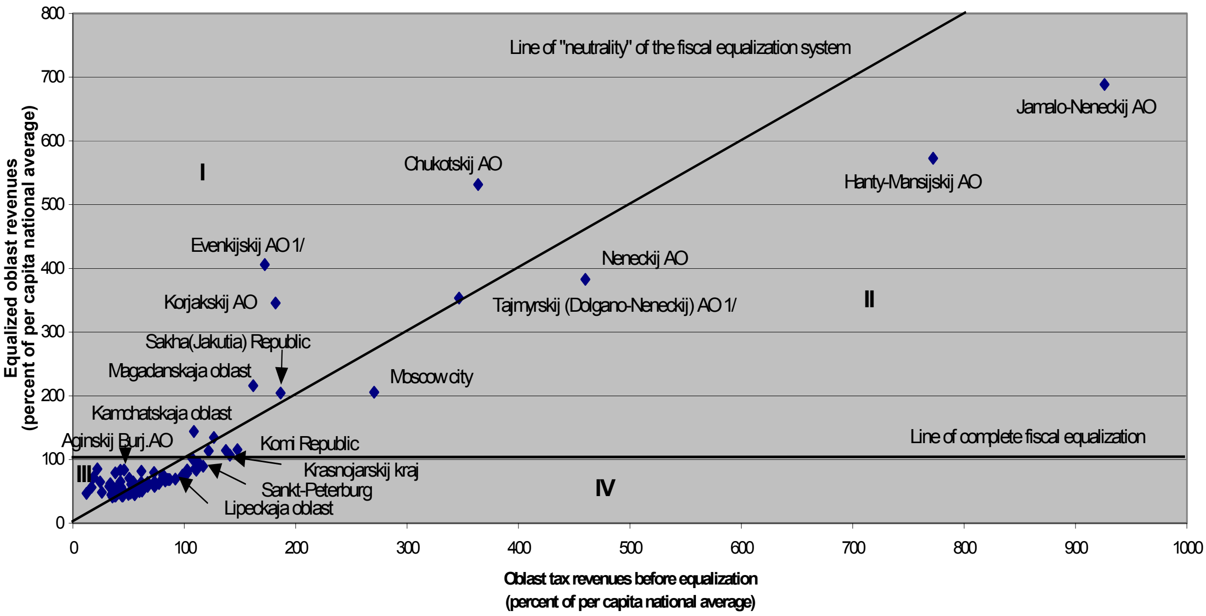
Source: Goskomstat and Ministry of Finance.

Figure 3
Russia: Regional indicators, Panel 2



1/ For the regions Tajmyrskij AO and Evenkijskij AO the years 2001 and 2002 were excluded due to data problems.
Source: Goskomstat and Ministry of Finance.

Figure 4
Regional revenues before and after fiscal equalization, averages 1996-2003
(in percent of the national per capita average)



1/ For the regions Evenkijskij AO and Tajmyrskij AO the years 2001 and 2002 were excluded due to data problems.
Source: Goskomstat and Ministry of Finance.

Figure 4.1
Regional revenues before and after fiscal equalization, 1996
(in percent of the national per capita average)

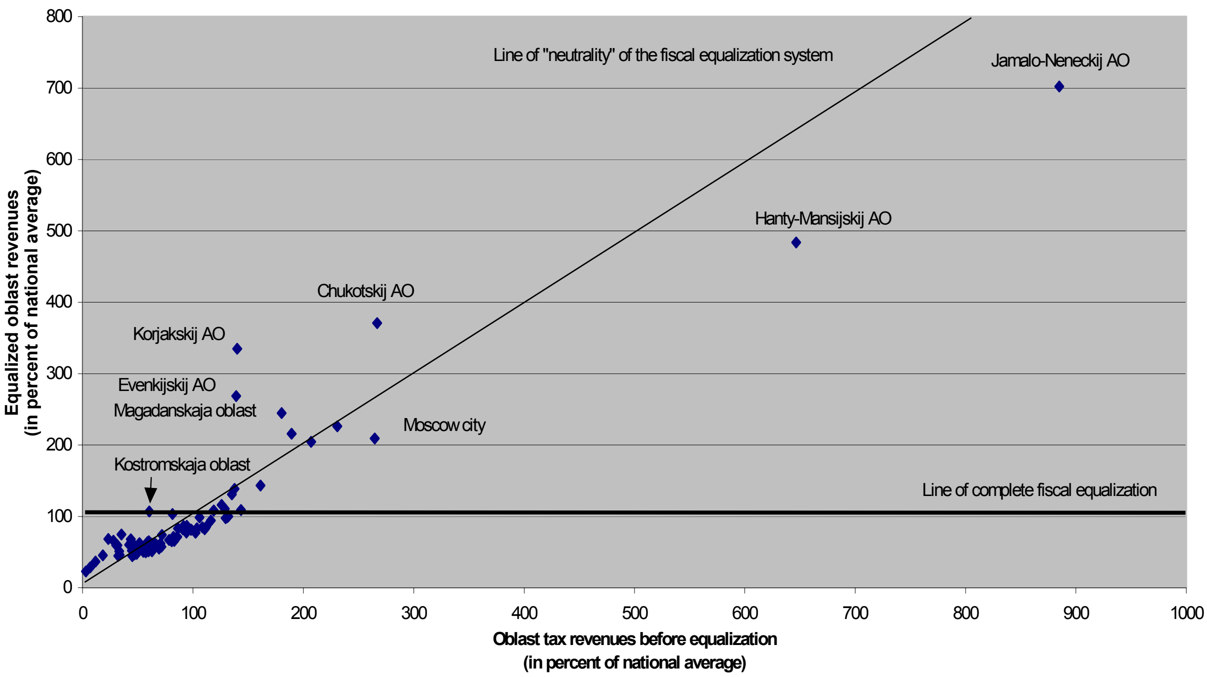


Figure 4.2
Regional revenues before and after fiscal equalization, 1997
(in percent of the national per capita average)

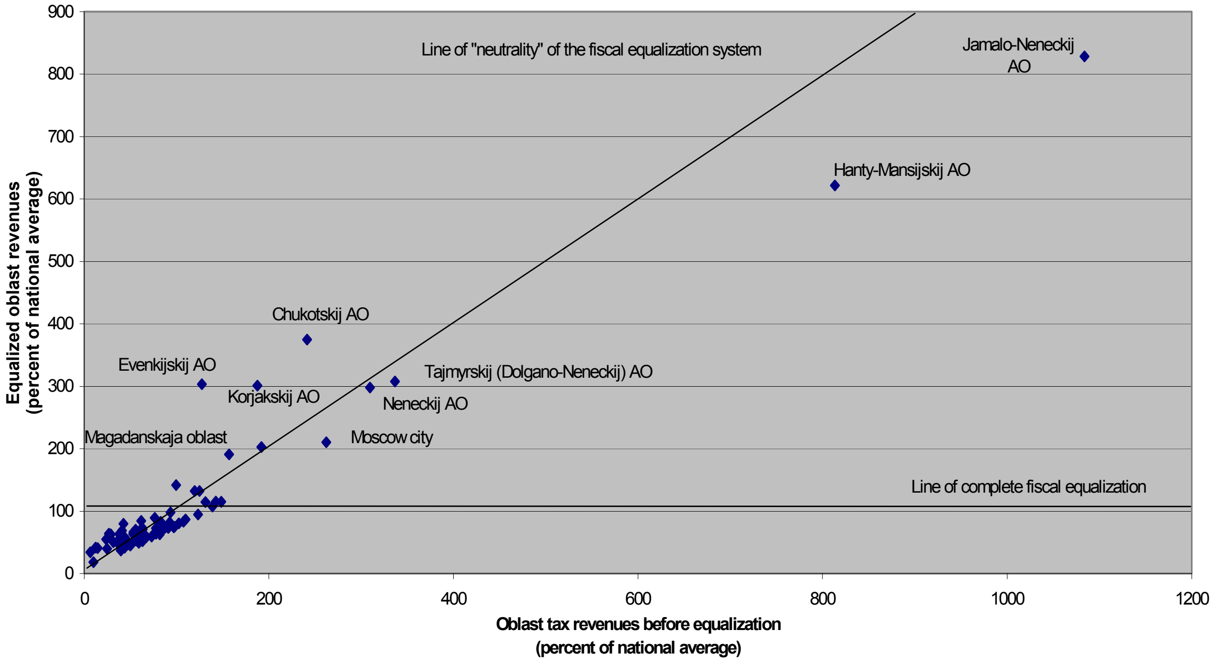


Figure 4.3
Regional revenues before and after fiscal equalization, 1998
(in percent of the national per capita average)

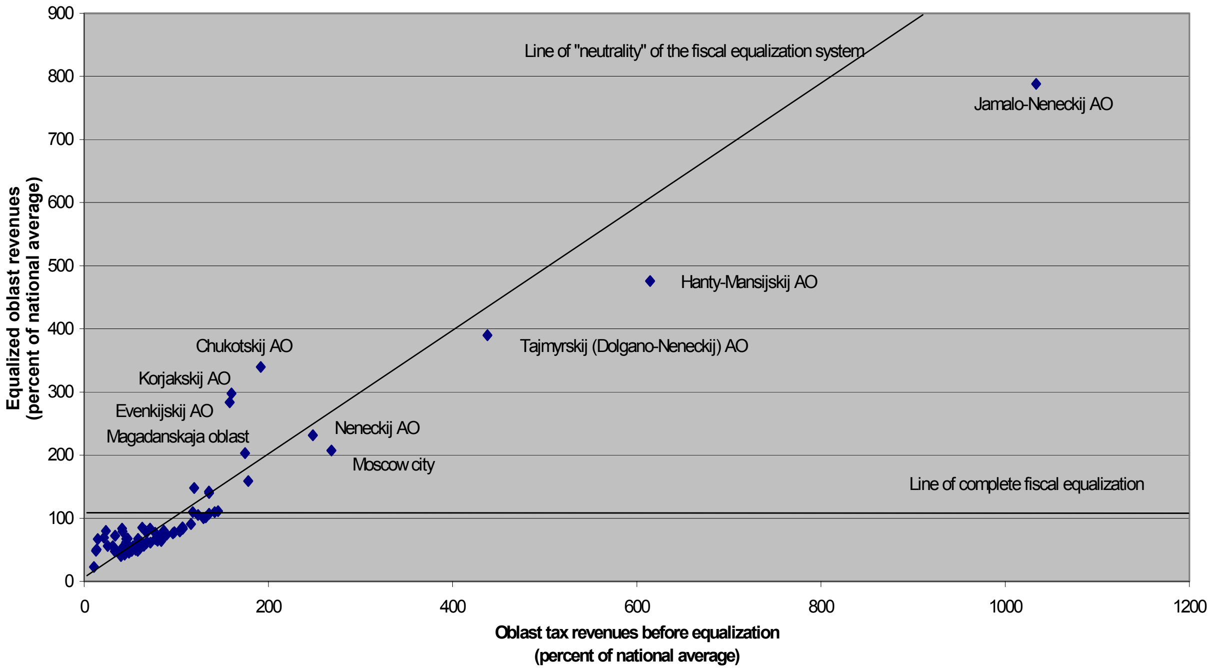


Figure 4.4
Regional revenues before and after fiscal equalization, 1999
(in percent of the national per capita average)

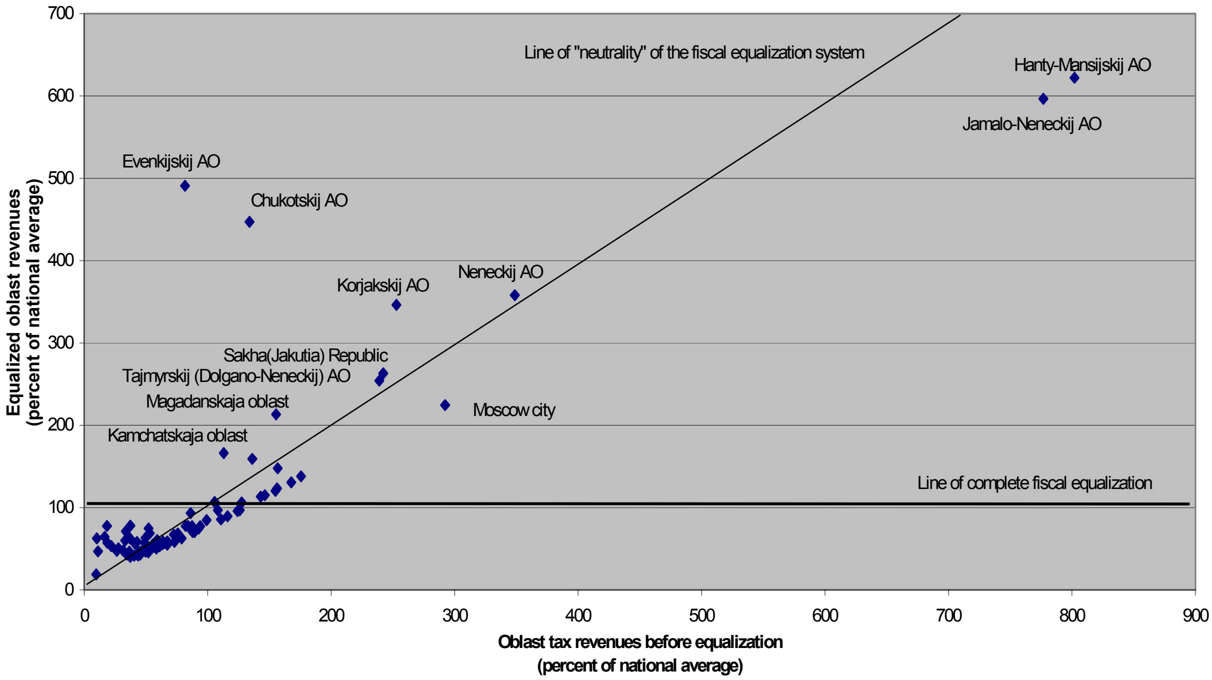


Figure 4.5
Regional revenues before and after fiscal equalization, 2000
(in percent of the national per capita average)

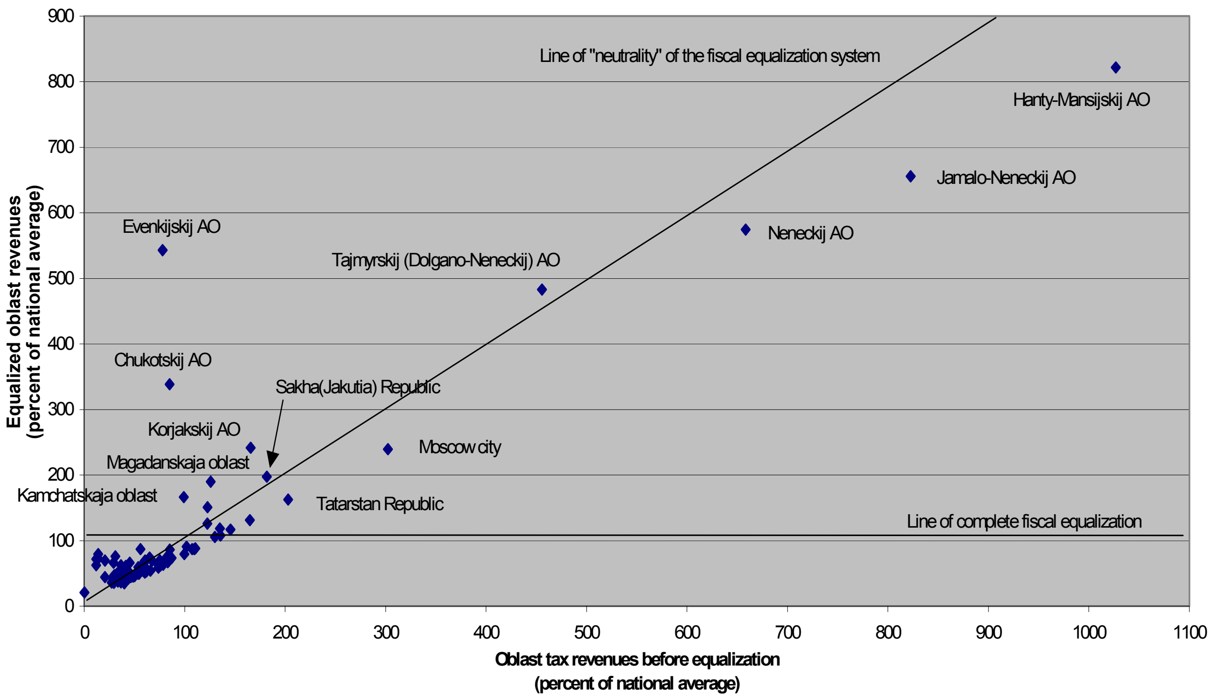
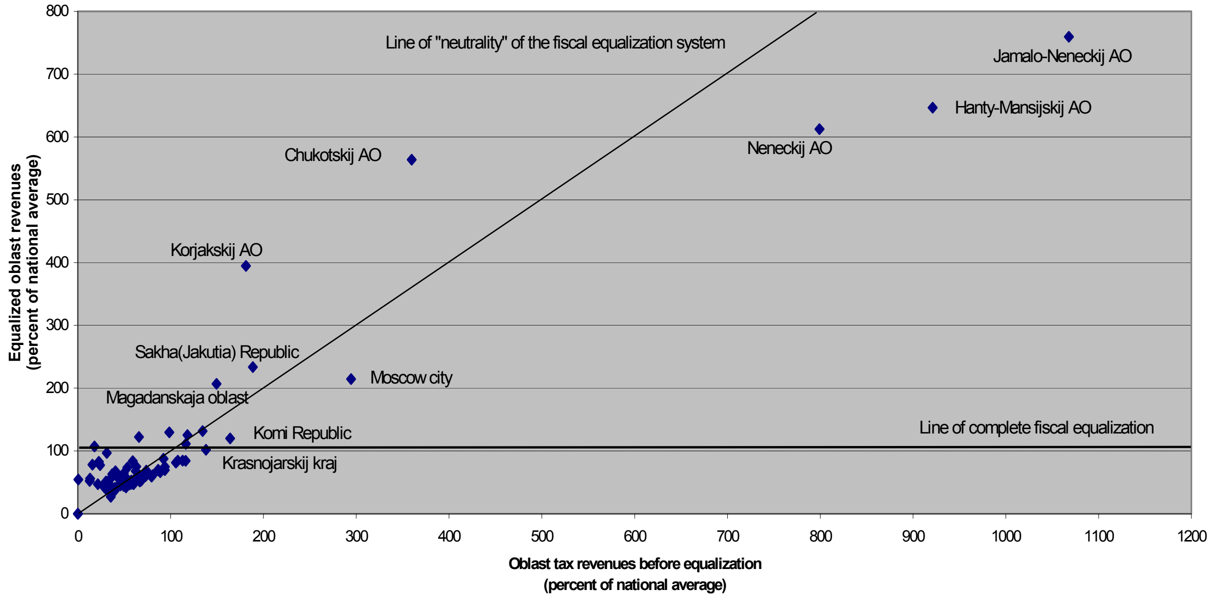
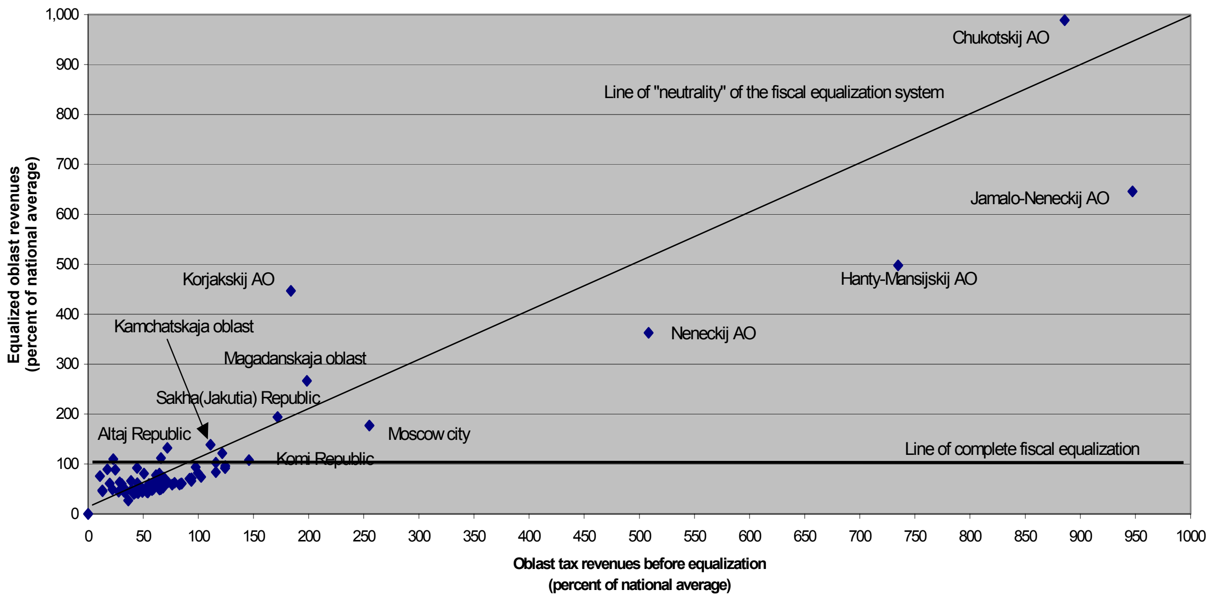


Figure 4.6
Regional revenues before and after fiscal equalization, 2001 1/
(in percent of the national per capita average)



1/ The regions Evenkijskij AO and Tajmyrskij AO were excluded due to data problems.

Figure 4.7
Regional revenues before and after fiscal equalization, 2002 1/
(in percent of the national per capita average)



1/ The regions Evenkijskij AO and Tajmyrskij AO were excluded due to data problems.

Figure 4.8
Regional revenues before and after fiscal equalization, 2003
(in percent of the national per capita average)